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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/672,738	09/28/2000	Yukio Tanaka	SEL 216	7356

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EXAMINER

ALPHONSE, FRITZ

ART UNIT	PAPER NUMBER
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2675

16

DATE MAILED: 03/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/672,738

Applicant(s)

TANAKA, YUKIO

Examiner

Fritz Alphonse

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, 23-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsuhashi (U.S. Pat. No. 4,830,466).

As to claim 1, Matsuhashi (figs. 4, 5) show a display device comprising: a pixel portion (i.e., picture elements) in which (m x 2n) pixels (note that the matrix has m gate lines, and split down middle of display forming 2n), each including at least one TFT (see figure 1, the display device is directed to active matrix display which has gate drivers...etc; see abstract), are arranged in matrix form; a source driver (note source line 11b (fig. 1) as applied to figure 4) for supplying video signals to 2n source signal lines (note fig. 4 shows 2n signal source); a first gate driver for supplying selection signals to m first gate signal lines, and a second gate driver for supplying selection signals to m second gate signal lines (see figures 5 and 6 in which e1=G1L, e2= G1R, e3= (Gr+1L or G2L), e4= (Gr+1R or G2R); note also the odd and even representation of e1 and e2 in figure 4) wherein: the pixels connected to the source signal lines (i.e., left portion 1a) are supplied with the selection signals from the first gate signal lines (e1, e3, e5,... etc); the pixels connected to the source signal lines (i.e., right portion 1b), are supplied with the selection signals from the second gate signal lines (e2, e4, e6,... etc). Matsuhashi teaches the selection signal starts to be supplied to the second gate signal line GrR (or e2) while

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the selection signal is supplied to the first gate signal line GrL (or e1); note in figures 5 and 6, e1 and e2 are selected; and the selection signal starts to be supplied to the first gate signal line Gr+1L (or e3) while the selection signal is supplied to the second gate signal line GrR (or e2); (note in figures 5 and 6, e2 and e3 are selected). Matsuhashi teaches that the pixel portion (i.e., picture elements), the source driver (note source line 11b (fig. 1), the first gate driver (e1) and the second gate driver (e2) comprises at least one TFT formed over a same substrate (see figure 1), wherein the selection signal to the first gate Gr+ 1L (or e3) rises to a static state after the selection signal to the first signal GrL falls (compare e1 and e3), and wherein the selection signal to the first gate signal Gr+1R rises to the static state after the selection signal to the first signal line GrR falls (compare e4 and e2).

As to claim 2, the claim differs from claim 1 by the additional limitation "the selection signals are sequentially supplied to the first gate signal line G1L, the second gate signal line G1R, the first gate signal line G2L, the second gate signal line G2R". However, these limitations are disclosed by Matsuhashi (note in figure 5, Matsuhashi shows horizontal sync. signal data sequentially supplied to signal lines e1, e2,...e<sub>m</sub>).

As to claims 23-24, method claims 23-24 correspond to apparatus claims 1 and 2. Therefore, they are analyzed as previously discussed in claims 1 and 2 above.

As to claim 25, the claim differs from claim 1 by the additional limitation "wherein the r first gate signal lines of the first gate driver are not connected to the r second gate signal lines of the second gate driver. However, these limitations are disclosed by Matsuhashi (see figure 4 wherein e1 and e3 are not connected).

*Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsushita in view of Akebi (U.S. Pat. No. 5,825,342).

As to claims 3-10, Matsushita does not teach about a projector comprising two to three display devices. However, this limitation is disclosed by Akebi (col. 5, lines 32-50; col. 10, lines 31-37).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Matsushita by specifically providing a projector including a plurality of liquid crystal displays, as disclosed by Akebi. By doing so, a projector can yield maximum contrast using a transmitting light.

5. Claims 11-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsushita in view of Yamazaki (U.S. Pat. No. 6,384,86).

As to claims 11-22, Matsushita does not teach a head mount display, a computer, a video camera, a DVD player or a display device comprising a display device. However, these limitations are disclosed by Yamazaki (see figures 13A-j).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to improve upon the active matrix display as taught by Yamazaki. The motivation would have been a desire to use a liquid crystal display that is inexpensive to produce and has a high degree of scattering.

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***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tsuzuki et al. (U.S. Pat. No. 5,745,093) discloses a liquid crystal display driving system.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fritz Alphonse whose telephone number is (703) 308-8534.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Saras, can be reached at (703) 305-9720.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to: (703) 872-9314 ( for Technology Center 2600 only )**

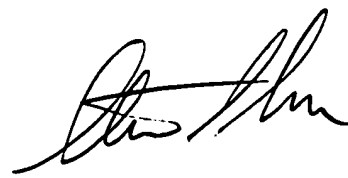
Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

  
F. Alphonse

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March 18, 2004

  
**STEVEN SARAS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600**